eurofins | Spectrum Analytical

☑ Final Report
☐ Revised Report

Report Date:
02-Oct-18 13:17

Laboratory Report
SC50467

Gulf Oil L.P.
281 Eastern Avenue
Chelsea, MA 02150
Attn: Andrew P. Adams

Project: Gulf Terminal - Chelsea, MA
Project #: Gulf Chelsea

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87936
Maine # MA138
New Hampshire # 2972/2538
New Jersey # MA011
New York # 11393
Pennsylvania # 68-04426/68-02924
Rhode Island # LAO00348
USDA # P330-15-00375
Vermont # VT-11393

Authorized by:

Dawn Wojcik
Laboratory Director

Dawn E Wojcik

Eurofins Spectrum Analytical holds primary certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 11 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

Eurofins Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Eurofins Spectrum Analytical, Inc. is currently accredited for the specific method or analyte indicated. Please refer to our 'Quality' web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Eurofins Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (PA-68-04426).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

Sample Summary

Work Order: SC50467

Project: Gulf Terminal - Chelsea, MA

Project Number: Gulf Chelsea

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SC50467-01	Outfall 003	Surface Water	20-Sep-18 11:50	20-Sep-18 16:23

CASE NARRATIVE:

Data has been reported to the MDL. This report includes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the detection limit are reported as "<" (less than) the detection limit in this report.

The samples were received 2.9 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group. If method or program required MS/MSD/Dup were not performed, sufficient sample was not provided to the laboratory.

Analyses for Total Hardness, pH, and Total Residual Chlorine fall under the state of Pennsylvania code Chapter 252.6 accreditation by rule.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SM4500-Cl-G (11)

Spikes:

1812971-MS1 *Source: SC50467-01*

The spike recovery for this QC sample is outside the established control limits. The sample results for the QC batch were accepted based on LCS/LCSD or SRM recoveries within the control limits.

Total Residual Chlorine

1812971-MSD1 *Source: SC50467-01*

The spike recovery for this QC sample is outside the established control limits. The sample results for the QC batch were accepted based on LCS/LCSD or SRM recoveries within the control limits.

Total Residual Chlorine

SM5310B (00, 11)

Samples:

SC50467-01 *Outfall 003*

The Reporting Limit has been raised to account for matrix interference.

Total Organic Carbon

SW6020B

Laboratory Control Samples:

CB35489-LCS

Laboratory water was used for the matrix spike.

Copper
Lead
Nickel
Zinc

CB35489-BLK

SW6020B

CB35489-BLK

Laboratory water was used for the matrix spike.

Copper
Lead
Nickel
Zinc

CB35489-DUP

Laboratory water was used for the matrix spike.

Copper
Lead
Nickel
Zinc

CB35489-MS

Laboratory water was used for the matrix spike.

Copper
Lead
Nickel
Zinc

Sample Acceptance Check Form

Client:	Gulf Oil L.P.
Project:	Gulf Terminal - Chelsea, MA / Gulf Chelsea
Work Order:	SC50467
Sample(s) received on:	9/20/2018

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	Yes	No	N/A
Were custody seals present?	☐	☑	☐
Were custody seals intact?	☐	☐	☑
Were samples received at a temperature of ≤ 6°C?	☑	☐	☐
Were samples refrigerated upon transfer to laboratory representative?	☑	☐	☐
Were sample containers received intact?	☑	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☑	☐	☐
Were samples accompanied by a Chain of Custody document?	☑	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☐	☑	☐
Did sample container labels agree with Chain of Custody document?	☑	☐	☐
Were samples received within method-specific holding times?	☑	☐	☐

Summary of Hits

Lab ID: SC50467-01 **Client ID:** Outfall 003

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Ammonia as Nitrogen	0.15		0.05	mg/L	E350.1
Total Solids	231		5.00	mg/l	SM2540 B (11)
Total Suspended Solids	91.0		5.0	mg/l	SM2540D (11)
Total Organic Carbon	2.60	R01	1.00	mg/l	SM5310B (00, 11)
Copper	0.0093		0.0025	mg/L	SW6020B
Lead	0.0213		0.0005	mg/L	SW6020B
Nickel	0.0041		0.0025	mg/L	SW6020B
Zinc	0.053		0.005	mg/L	SW6020B

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Outfall 003 SC50467-01	Gulf Chelsea	Surface Water	20-Sep-18 11:50	20-Sep-18

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
General Chemistry Parameters													
7782-50-5	Total Residual Chlorine	< 0.020	CIHT	mg/l	0.020	0.006	1	SM4500-Cl-G (11)	27-Sep-18 08:36	27-Sep-18 10:01	RLT	1812971	X
	pH	**6.75**	pH	pH Units			1	ASTM D 1293-99B	20-Sep-18 18:15	20-Sep-18 18:38	BD	1812763	X
	Salinity	< 1.00		ppt (1000)	1.00	0.144	1	SM 2520 (01)	21-Sep-18	21-Sep-18	BD	1812778	
	Total Solids	**231**		mg/l	5.00	1.53	1	SM2540 B (11)	27-Sep-18	28-Sep-18	CMB	1812991	
	Total Suspended Solids	**91.0**		mg/l	5.0	2.2	1	SM2540D (11)	21-Sep-18	24-Sep-18	BD	1812779	X
	Total Organic Carbon	**2.60**	R01	mg/l	1.00	0.238	1	SM5310B (00, 11)	27-Sep-18	27-Sep-18	RLT	1812970	X
Subcontracted Analyses													
Prepared by method E350.1													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
7664-41-7	Ammonia as Nitrogen	**0.15**		mg/L	0.05	0.02	1	E350.1	20-Sep-18 11:50	25-Sep-18 07:53	CT007	448692A	
Prepared by method SM3113B/SW7010-1													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
7440-43-9	Cadmium	< 0.0001		mg/L	0.0001	0.0001	1	SM3113B/SW7010-1	27-Sep-18	28-Sep-18 09:31	CT007	449326A	
Subcontracted Analyses													
Prepared by method SW6020B													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
7440-50-8	Copper	**0.0093**		mg/L	0.0025	0.0005	5	SW6020B	21-Sep-18	26-Sep-18 14:30	CT007	448531A	
7439-92-1	Lead	**0.0213**		mg/L	0.0005	0.0005	5	"	"	"	"	"	
7440-02-0	Nickel	**0.0041**		mg/L	0.0025	0.0005	5	"	"	"	"	"	
7440-66-6	Zinc	**0.053**		mg/L	0.005	0.0005	5	"	"	"	"	"	

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
ASTM D 1293-99B										
Batch 1812763 - General Preparation										
Reference (1812763-SRM1)					Prepared & Analyzed: 20-Sep-18					
pH	**6.00**		pH Units		6.00		100	97.5-102.5		
Reference (1812763-SRM2)					Prepared & Analyzed: 20-Sep-18					
pH	**5.99**		pH Units		6.00		100	97.5-102.5		
SM 2520 (01)										
Batch 1812778 - General Preparation										
Reference (1812778-SRM1)					Prepared & Analyzed: 21-Sep-18					
Salinity	**10.2**		ppt (1000)	1.00	10.0		102	90-110		
Reference (1812778-SRM2)					Prepared & Analyzed: 21-Sep-18					
Salinity	**10.1**		ppt (1000)	1.00	10.0		101	90-110		
SM2540 B (11)										
Batch 1812991 - General Preparation										
Blank (1812991-BLK1)					Prepared: 27-Sep-18 Analyzed: 28-Sep-18					
Total Solids	< 5.00		mg/l	5.00						
LCS (1812991-BS1)					Prepared: 27-Sep-18 Analyzed: 28-Sep-18					
Total Solids	**1100**		mg/l	10.0	1100		100	90-110		
Duplicate (1812991-DUP1)			**Source: SC50467-01**		Prepared: 27-Sep-18 Analyzed: 28-Sep-18					
Total Solids	**233**		mg/l	5.00		231			0.9	5
SM2540D (11)										
Batch 1812779 - General Preparation										
Blank (1812779-BLK1)					Prepared: 21-Sep-18 Analyzed: 24-Sep-18					
Total Suspended Solids	< 0.5		mg/l	0.5						
LCS (1812779-BS1)					Prepared: 21-Sep-18 Analyzed: 24-Sep-18					
Total Suspended Solids	**102**		mg/l	10.0	100		102	90-110		
SM4500-Cl-G (11)										
Batch 1812971 - General Preparation										
Blank (1812971-BLK1)					Prepared & Analyzed: 27-Sep-18					
Total Residual Chlorine	< 0.020		mg/l	0.020						
LCS (1812971-BS1)					Prepared & Analyzed: 27-Sep-18					
Total Residual Chlorine	**0.049**		mg/l	0.020	0.0500		98	90-110		
Calibration Blank (1812971-CCB1)					Prepared & Analyzed: 27-Sep-18					
Total Residual Chlorine	**-0.003**		mg/l							
Calibration Blank (1812971-CCB2)					Prepared & Analyzed: 27-Sep-18					
Total Residual Chlorine	**-0.004**		mg/l							
Calibration Blank (1812971-CCB3)					Prepared & Analyzed: 27-Sep-18					
Total Residual Chlorine	**-0.002**		mg/l							
Calibration Check (1812971-CCV1)					Prepared & Analyzed: 27-Sep-18					
Total Residual Chlorine	**0.045**		mg/l	0.020	0.0500		91	90-110		
Calibration Check (1812971-CCV2)					Prepared & Analyzed: 27-Sep-18					
Total Residual Chlorine	**0.045**		mg/l	0.020	0.0500		90	90-110		
Calibration Check (1812971-CCV3)					Prepared & Analyzed: 27-Sep-18					
Total Residual Chlorine	**0.055**		mg/l	0.020	0.0500		110	90-110		
Duplicate (1812971-DUP1)			**Source: SC50467-01**		Prepared & Analyzed: 27-Sep-18					
Total Residual Chlorine	< 0.020		mg/l	0.020		BRL				20
Matrix Spike (1812971-MS1)			**Source: SC50467-01**		Prepared & Analyzed: 27-Sep-18					
Total Residual Chlorine	**0.067**	QM9	mg/l	0.020	0.0500	BRL	133	80-120		
Matrix Spike Dup (1812971-MSD1)			**Source: SC50467-01**		Prepared & Analyzed: 27-Sep-18					

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SM4500-Cl-G (11)										
Batch 1812971 - General Preparation										
Matrix Spike Dup (1812971-MSD1)			**Source: SC50467-01**			Prepared & Analyzed: 27-Sep-18				
Total Residual Chlorine	**0.067**	QM9	mg/l	0.020	0.0500	BRL	135	80-120	1	200
Reference (1812971-SRM1)						Prepared & Analyzed: 27-Sep-18				
Total Residual Chlorine	**0.115**		mg/l	0.020	0.117		98	98-101		
SM5310B (00, 11)										
Batch 1812970 - General Preparation										
Blank (1812970-BLK1)						Prepared & Analyzed: 27-Sep-18				
Total Organic Carbon	< 1.00		mg/l	1.00						
LCS (1812970-BS1)						Prepared & Analyzed: 27-Sep-18				
Total Organic Carbon	**4.30**		mg/l	1.00	5.00		86	85-115		
Calibration Blank (1812970-CCB1)						Prepared & Analyzed: 27-Sep-18				
Total Organic Carbon	**0.102**		mg/l							
Calibration Blank (1812970-CCB2)						Prepared & Analyzed: 27-Sep-18				
Total Organic Carbon	**0.129**		mg/l							
Calibration Blank (1812970-CCB3)						Prepared & Analyzed: 27-Sep-18				
Total Organic Carbon	**0.110**		mg/l							
Calibration Check (1812970-CCV1)						Prepared & Analyzed: 27-Sep-18				
Total Organic Carbon	**4.48**		mg/l	1.00	5.00		90	85-115		
Calibration Check (1812970-CCV2)						Prepared & Analyzed: 27-Sep-18				
Total Organic Carbon	**4.30**		mg/l	1.00	5.00		86	85-115		
Calibration Check (1812970-CCV3)						Prepared & Analyzed: 27-Sep-18				
Total Organic Carbon	**4.72**		mg/l	1.00	5.00		94	85-115		
Duplicate (1812970-DUP1)			**Source: SC50467-01**			Prepared & Analyzed: 27-Sep-18				
Total Organic Carbon	**2.98**		mg/l	1.00		2.60			14	20
Matrix Spike (1812970-MS1)			**Source: SC50467-01**			Prepared & Analyzed: 27-Sep-18				
Total Organic Carbon	**7.32**		mg/l	1.00	5.00	2.60	94	70-130		
Matrix Spike Dup (1812970-MSD1)			**Source: SC50467-01**			Prepared & Analyzed: 27-Sep-18				
Total Organic Carbon	**7.33**		mg/l	1.00	5.00	2.60	95	70-130	0.2	30
Reference (1812970-SRM1)						Prepared & Analyzed: 27-Sep-18				
Total Organic Carbon	**4.65**		mg/l	1.00	5.00		93	85-115		

Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
E350.1										
Batch 448692A - E350.1										
BLK (CB35671-BLK)			**Source: CB35671**			Prepared: 24-Sep-18 Analyzed: 25-Sep-18				
Ammonia as Nitrogen	< 0.05		mg/L	0.05			BRL	-		
DUP (CB35671-DUP)			**Source: CB35671**			Prepared: 24-Sep-18 Analyzed: 25-Sep-18				
Ammonia as Nitrogen	**0.11**		mg/L	0.10				-	NC	20
LCS (CB35671-LCS)			**Source: CB35671**			Prepared: 24-Sep-18 Analyzed: 25-Sep-18				
Ammonia as Nitrogen	**3.900**		mg/L	0.05	3.74		104	90-110		20
MS (CB35671-MS)			**Source: CB35671**			Prepared: 24-Sep-18 Analyzed: 25-Sep-18				
Ammonia as Nitrogen	**4.240**		mg/L	0.05	4		103	90-110		20
SM3113B/SW7010-1										
Batch 449326A - SM3113B/SW7010-1										
BLK (CB39279-BLK)			**Source: CB39279**			Prepared: 27-Sep-18 Analyzed: 28-Sep-18				
Cadmium	< 0.0001		mg/L	0.0001			BRL	-		
DUP (CB39279-DUP)			**Source: CB39279**			Prepared: 27-Sep-18 Analyzed: 28-Sep-18				
Cadmium	< 0.0001		mg/L	0.0001				-	NC	20
LCS (CB39279-LCS)			**Source: CB39279**			Prepared: 27-Sep-18 Analyzed: 28-Sep-18				
Cadmium	**0.5570**		mg/L	0.0001	0.5		111	75-125		20
MS (CB39279-MS)			**Source: CB39279**			Prepared: 27-Sep-18 Analyzed: 28-Sep-18				
Cadmium	**0.6210**		mg/L	0.0001	0.5		124	75-125		20
SW6020B										
Batch 448531A - SW6020B										
BLK (CB35489-BLK)			**Source: CB35489**			Prepared: 21-Sep-18 Analyzed: 26-Sep-18				
Copper	< 0.0025	c1	mg/L	0.0025			BRL	-		
Zinc	< 0.005	c1	mg/L	0.005			BRL	-		
Lead	< 0.0005	c1	mg/L	0.0005			BRL	-		
Nickel	< 0.0025	c1	mg/L	0.0025			BRL	-		
DUP (CB35489-DUP)			**Source: CB35489**			Prepared: 21-Sep-18 Analyzed: 26-Sep-18				
Copper	**0.0050**	c1	mg/L	0.0025				-	5.8	20
Lead	< 0.0005	c1	mg/L	0.0005				-	NC	20
Nickel	**0.0038**	c1	mg/L	0.0025				-	5.1	20
Zinc	**0.039**	c1	mg/L	0.005				-	0.0	20
LCS (CB35489-LCS)			**Source: CB35489**			Prepared: 21-Sep-18 Analyzed: 26-Sep-18				
Copper	**0.05560**	c1	mg/L	0.0025	0.05		111	75-125		20
Lead	**0.05160**	c1	mg/L	0.0005	0.05		103	75-125		20
Nickel	**0.05120**	c1	mg/L	0.0025	0.05		102	75-125		20
Zinc	**0.05870**	c1	mg/L	0.005	0.05		117	75-125		20
MS (CB35489-MS)			**Source: CB35489**			Prepared: 21-Sep-18 Analyzed: 26-Sep-18				
Zinc	**0.06050**	c1	mg/L	0.005	0.05		121	75-125		20
Copper	**0.05400**	c1	mg/L	0.0025	0.05		108	75-125		20
Lead	**0.05160**	c1	mg/L	0.0005	0.05		103	75-125		20
Nickel	**0.05260**	c1	mg/L	0.0025	0.05		105	75-125		20

Notes and Definitions

c1	Laboratory water was used for the matrix spike.
QM9	The spike recovery for this QC sample is outside the established control limits. The sample results for the QC batch were accepted based on LCS/LCSD or SRM recoveries within the control limits.
R01	The Reporting Limit has been raised to account for matrix interference.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
ClHT	The method for residual chlorine indicates that samples should be analyzed immediately. 40 CFR 136 specifies a holding time of 15 minutes from sampling to analysis. Therefore all aqueous residual chlorine samples not analyzed in the field are considered out of hold time at the time of sample receipt.
pH	The method for pH does not stipulate a specific holding time other than to state that the samples should be analyzed as soon as possible. For aqueous samples the 40 CFR 136 specifies a holding time of 15 minutes from sampling to analysis. Therefore all aqueous pH samples not analyzed in the field are considered out of hold time at the time of sample receipt. All soil samples are analyzed as soon as possible after sample receipt.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

SC50467

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

☑ Standard TAT - 7 to 10 business days

☐ Rush TAT - Date Needed: _____

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 60 days unless otherwise instructed.

Report To: Andrew Adams
Gulf Oil LP
281 Eastern Ave
Chelsea, MA 02150
Telephone #: 617.884.5980
Project Mgr: Andrew Adams

Invoice To: Christopher Gill
Gulf Oil LP
80 William St, Suite 400
Wellesley, MA 02481-3705
P.O No.: _____ Quote/RQN: _____

Project No: Gulf Chelsea
Site Name: Gulf Chelsea Terminal
Location: 281 Eastern Ave, Chelsea State: MA
Sampler(s): _____

F=Field Filtered **1**=Na_2S2O_3 **2**=HCl **3**=H_2SO_4 **4**=HNO_3 **5**=NaOH **6**=Ascorbic Acid
7=CH3OH **8**=$NaHSO_4$ **9**=Deionized Water **10**=H_3PO_4 **11**= none **12**= _____

DW=Dinking Water **GW**=Groundwater **SW**=Surface Water **WW**=Waste Water
O=Oil **SO**=Soil **SL**=Sludge **A**=Indoor/Ambient Air **SG**=Soil Gas
X1= _____ **X2**= _____ **X3**= _____

G= Grab **C**=Compsite

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analysis: Ammonia	pH	TSS	salinity, total solids, TRC	Total Recov. (Cd, Cu, Pb, Ni, Zn)*	TOC	LC50 **	Check if chlorinated
SC50467-1	Outfall 003	9-20-18	1150	G	SW				1	X							☐
	Outfall 003	9-20-18	1150	G	SW				1		X						☐
	Outfall 003	9-20-18	1150	G	SW				1			X					☐
	Outfall 003	9-20-18	1150	G	SW				1				X				☐
	Outfall 003	9-20-18	1150	G	SW				1					X			☐
	Outfall 003	9-20-18	1150	G	SW	2									X		☐
	~~Outfall 003~~			~~G~~	SW				1							X	☐
																	☐
																	☐
																	☐

List Preservative Code below:

3	11	11	11	4	10	11

QA/QC Reporting Notes:
* additional charges may appply

MA DEP MCP CAM Report? ☐ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No
☑ Standard ☐ No QC ☐ DQA*
☐ ASP A* ☐ ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other: _____
State-specific reporting standards:

VOCs: benzene, naphthalene,
MTBE, and ethanol
Required Minimum Levels:
benzene-2 µg/L; ethanol-400 µg/L
naphthalene-5 µg/L
benzo(a)pyrene - 0.1 µg/L
Cd, Pb, Ni - 0.2 ug/L
Cu - 0.5 µg/L; Zn - 5 µg/L
*** Report down to MDL**
****LC50 sub to GZA**

LC50 sample delivered to GZA

Relinquished by:	Received by:	Date:	Time:
	David Dec	9-20-18	1215
David Dec		9/20/18	1623

Temp °C: Observed 2.9 | Correction Factor 0 | Corrected 2.9 | IR ID # 01

☐ EDD format: _____
☑ E-mail to: aadams@gulfoil.com, cgill@gulfoil.com, and jennifer.atkins@aecom.com

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
☐ Ambient ☐ Iced ☒ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

Batch Summary

1812763

General Chemistry Parameters

1812763-SRM1
1812763-SRM2
SC50467-01 (Outfall 003)

1812778

General Chemistry Parameters

1812778-SRM1
1812778-SRM2
SC50467-01 (Outfall 003)

1812779

General Chemistry Parameters

1812779-BLK1
1812779-BS1
SC50467-01 (Outfall 003)

1812970

General Chemistry Parameters

1812970-BLK1
1812970-BS1
1812970-CCB1
1812970-CCB2
1812970-CCB3
1812970-CCV1
1812970-CCV2
1812970-CCV3
1812970-DUP1
1812970-MS1
1812970-MSD1
1812970-SRM1
SC50467-01 (Outfall 003)

1812971

General Chemistry Parameters

1812971-BLK1
1812971-BS1
1812971-CCB1
1812971-CCB2
1812971-CCB3
1812971-CCV1
1812971-CCV2
1812971-CCV3
1812971-DUP1
1812971-MS1
1812971-MSD1
1812971-SRM1
SC50467-01 (Outfall 003)

1812991

General Chemistry Parameters

1812991-BLK1
1812991-BS1
1812991-DUP1
SC50467-01 (Outfall 003)

448531A

Subcontracted Analyses

CB35489-BLK
CB35489-DUP
CB35489-LCS
CB35489-MS
SC50467-01 (Outfall 003)

448692A

Subcontracted Analyses

CB35671-BLK
CB35671-DUP
CB35671-LCS
CB35671-MS
SC50467-01 (Outfall 003)

449326A

Subcontracted Analyses

CB39279-BLK
CB39279-DUP
CB39279-LCS
CB39279-MS
SC50467-01 (Outfall 003)